

What is claimed is:

1. An optical transceiver module having an optical semiconductor device coupled to an optical fiber via an optical connector attached to an end of said optical fiber, said optical transceiver comprising:

5           at least one optical subassembly containing said optical semiconductor device therein;

          an optical receptacle for optically coupling said optical fiber to said optical semiconductor device by mating said optical connector with said optical subassembly within said optical receptacle;

10           a substrate electrically connected to said optical subassembly;

          a frame for installing said optical subassembly, said optical receptacle and said substrate; and

          a cover for covering said optical subassembly, said optical receptacle and said substrate by cooperating with said frame,

15           wherein said optical receptacle is optionally positioned to said frame.

2. The optical transceiver module according to claim 1,

          wherein said optical subassembly and said substrate are rigidly positioned to said frame, and said optical receptacle is rigidly positioned to said optical

20           subassembly.

3. The optical transceiver module according to claim 1,

          wherein said frame has a major surface where said optical receptacle, said subassembly and said substrate are installed thereon, and

25           wherein said optical receptacle is optionally positioned to said frame in a direction across said major surface of said frame.

4. The optical transceiver module according to claim 3,

wherein said frame has a hole with a thread in an inner surface thereof and said optical receptacle has another hole cooperating with said hole of said frame, said  
5 another hole not providing any thread in an inner surface thereof, said hole of said frame forming a screw hole by cooperating with said another hole of said optical receptacle, and

wherein said optical receptacle is optionally positioned to said frame by a screw tightened in said screw hole.

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5. The optical transceiver module according to claim 3,

wherein said optical receptacle is optionally positioned to said frame by adhesive filled therebetween.

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6. The optical transceiver module according to claim 1,

wherein said optical subassembly has a box-like shape having a bottom, said bottom facing to a major surface of said frame and being in contact with said major surface in an entire of said bottom.

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7. The optical transceiver module according to claim 6,

wherein said optical subassembly includes a thermoelectric element therein for controlling temperatures of said optical semiconductor device.

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8. The optical transceiver module according to claim 1,

wherein said optical subassembly has a disk-like shape and said frame has a receiving structure with a cylindrical surface corresponding to said disk-like shape,

and

wherein said optical subassembly is rigidly positioned to said frame by fitting said disk-like shape thereof to said cylindrical surface of said frame.

5           9. The optical transceiver module according to claim 1,  
wherein said optical subassembly is a transmitting optical subassembly.

10           10. The optical transceiver module according to claim 1,  
wherein said optical subassembly is a receiving optical subassembly.

11. The optical transceiver module according to claim 1,  
wherein said optical subassembly is a transmitting optical subassembly and  
a receiving optical subassembly.

15           12. The optical transceiver module according to claim 1,  
wherein said frame is made of metal and said optical subassembly is made of  
resin.

13. The optical transceiver module according to claim 12,  
20           wherein said resin is coated with conductive material.

14. An optical transceiver module, comprising:  
a transmitting optical subassembly having a primary portion with a box-  
shape and a plurality of lead terminals, a laser diode being installed in said primary  
25           portion of said transmitting optical subassembly;  
a receiving optical subassembly having a primary portion with a co-axial

shape and a flexibly circuit board, a photodiode being installed in said primary portion of said receiving optical subassembly; and

a substrate including a plurality of electronic circuit elements thereon,

wherein said transmitting optical subassembly is electrically connected to said circuit elements via said lead terminals and said receiving optical subassembly is electrically connected to said circuit elements via said flexible circuit board.

15. The optical transceiver module according to claim 14,

wherein said substrate has first and second portions, said first portion extending from said second portion and locating side by side position with said transmitting optical subassembly, said first portion being electrically connected to said receiving optical subassembly via said circuit board and said second portion being electrically connected to said transmitting optical subassembly via said lead terminals.

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16. The optical transceiver module according to claim 14,

wherein said transmitting optical subassembly includes a thermoelectric element therein.

20 17. The optical transceiver module according to claim 17, further includes an electric connector fixed to said substrate.